Goal 2: 3rd Grade Numeracy

AUSTIN Independent School District

2024-25

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Numeracy in Austin ISD

In Austin ISD, we believe that math instruction should be engaging, relevant, and student-centered. We believe students can persevere with problem solving through flexible thinking and productive struggle. Our balanced model of instruction includes:

- Conceptual understanding
- Mathematical reasoning and strategies
- Numerical fluency

To instill a love for math in our youngest mathematicians, we are focusing on creating engaging math environments, encouraging student discourse and exploration of mathematical concepts, and expanding ways that students can show their thinking with math solutions.

Goal 2: 3rd Grade Numeracy

Goal 2: The percentage of 3rd-grade students earning meets grade level or above on the STAAR Mathematics Assessment in English or Spanish will increase from 39% in June of 24 to 55% by June of 2029.

GPM 2.1 The percentage of 2nd-grade students scoring in the recommended-for-intervention level on the NWEA MAP Mathematics Achievement Score Proficiency Indicator (below 30th percentile in English and Spanish) will decrease from 37% in June 2024 to 29% by June 2029.

Overarching Objectives

- Build foundational knowledge of math practices and instructional resources
- Increase understanding and competency of school leaders in math
- Support teachers with classroom implementation for improved student outcomes

What the Research Says

The mathematics performance of our nation's youth has been on the decline since 2019, and the gap only continues to widen.

64% of fourth graders across the United States scored below proficient on the NAEP Mathematics Assessment, and 25% scored at the Below Basic level.

- *National Assessment of Educational Progress, 2022*

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Group	2021-22 Spring	2022-23 Spring	2023-24 Spring	2024-25 Fall	2024-25 Target
All Students	38	32	37	37	36
American Indian	33	10	36	33	36
Asian	19	19	17	13	20
African American	63	55	64	54	61
Hispanic/LatinX	54	46	52	52	50
Pacific Islander	*	*	*	*	*
Two or More	13	12	18	14	15
White	14	10	12	13	15
Economic Disadvantage	59	49	57	50	54
Emergent Bilingual	58	48	59	58	56
Special Education	62	53	55	53	53

Key Takeaways:

- Large variability in student outcomes from year to year.
- Initial Fall 2024 outcomes suggest a decreasing trend for most student populations.
- Large gaps between underserved and all students.

*Denotes masked data using sample of less than 10 students

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Root Cause Analysis

Inconsistent Use of Research-Based Instructional Materials

Classroom and PLC observations revealed inconsistent use of STEMscopes and/or other high quality instructional materials (HQIM) during math instruction.

Inconsistent Implementation of Research-Based Math Practices

Classroom and PLC observations revealed inconsistent use of effective math instructional practices, such as hands-on learning opportunities and daily numeracy routines.

Lacking a Comprehensive Multi-Tiered System of Support

In most recent years, the need for interventions has increased but the district resourcing and alignment of practices for MTSS did not meet the need.

Lack of Observation, Coaching and Feedback Structures

Austin ISD has been using various, and at times misaligned, structures for coaching across departments and among different levels of supervision and support.

Strategies

Realignment of the curriculum documents and HQIM to incorporate evidence-based practices from the math research.

Content- and pedagogy-based professional learning for campus instructional leaders

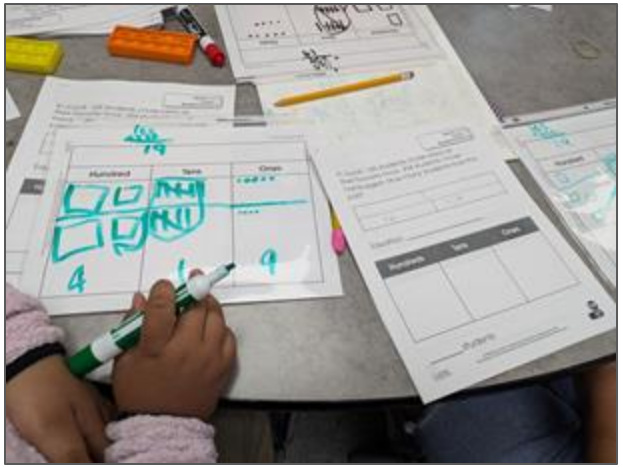
Targeted interventions and strategy adjustments based on ongoing data from the MTSS

Focus on classroom implementation through observation, coaching and feedback with common tools

Spotlight

Students using base ten blocks and discussing their long division strategies

- Student engagement
- Explicit supports
- Talking and thinking like mathematicians!



Student showing thinking using multiple representations during math intervention

Leadership Strategies

Design

- MTSS and math-aligned walkthrough tool
- Coaching protocol for district and campus instructional leaders
- Realigned curriculum to the research base in math
- Professional learning sessions for instructional leaders
- Professional Learning Communities and PLC Leads

Refine

- Systems of support for teachers to identify students requiring interventions, including addressing gaps in access and opportunities for targeted student groups
- Strategic coaching and feedback for leaders and teams; Principals, Assistant Principals and Instructional Coaches

Monitor

- Implementation of research-based resources and practices
- Centralized data management dashboard - Key data points for streamlined coaching and support to monitor student growth
- Implementation of PLCs

Research & Supporting Evidence

- Effective Mathematical Teaching Practices
  - National Council of Teachers of Mathematics. (2014). *Principles to actions: Ensuring Mathematical Success for All*. Reston, VA: Author
- Adding It Up: Helping Children Learn Mathematics
  - National Research Council. 2001. *Adding It Up: Helping Children Learn Mathematics*. Washington, DC: The National Academies Press
- Strengthening the Research Base That Informs STEM Instructional Improvement Efforts: A Meta-Analysis
  - Lynch, K., Hill, H.C., Gonzalez, K.E., & Pollard, C., (2019), from Educational Evaluation and Policy Analysis, September 2019.
- Curriculum Research: What We Know and Where We Need to Go
  - Steiner, D. (2017), from *Standards Work* - John Hopkins Institute for Educational Policy
- Practice What You Teach: Connecting Curriculum and Professional Learning
  - Weiner, R. & Pimentel, S. (2017), from Aspen Institute Education and Society Program
- High Quality Curricula and Team-Based Professional Learning: A Perfect Partnership for Equity
  - Learning Forward (2018) – white paper by a professional learning organization

Questions?

STRONG Schools
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